

A BREEDING INVASION BY RED-CAPPED ROBINS FOLLOWING A WILDFIRE AT GOOSEBERRY HILL

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The migratory status of the Red-capped Robin *Petroica goodenovii* in the Perth region is unclear. Whereas there is a resident population on Rottnest Island, they are considered to be off-season visitors to the Swan Coastal Plain and the Darling Range (Storr 1991). Detailed observations over 15 years (1984-1998) on a 140 ha area of the Darling Scarp at Gooseberry Hill, showed that their numbers usually peaked in March, although they were numerous only in 1985 and 1994, following major fires (Brooker 2001). I have several records of nesting from farms and orchards adjoining the Gooseberry Hill study area, but only one nesting record (1990) in the native vegetation of the study area *per se* (Brooker 2001).

There was an influx of Red-capped Robins following a hot summer fire on 22 December 2000, which burnt a portion of the original study area. During 2001, I regularly visited an 80 ha site (45 ha burnt, 35 ha unburnt) to monitor the survival and breeding of the Splendid Fairy-wren *Malurus splendens* population. A male Red-capped Robin was first seen on 19 August 2001 and, by October, six pairs were nesting on the burnt section of the site, with estimated

lay dates ranging from 5 - 25 September. Three pairs had a full plumaged male, one a male with a reddish cap and a single red breast feather, one a male with a reddish cap only and one with a reddish-tinged cap only. Four pairs fledged at least one offspring, the eggs in another nest hatched but no young fledged, while another nest was deserted with three eggs containing large embryos. All of the pairs moved elsewhere after nesting – the last bird was seen on 17 November 2001.

The birds probably came from areas to the west of Gooseberry Hill. Some robins were recorded in nearby semi-urban areas by Brooker (2001) and they were recorded throughout the year in a variety of coastal plain habitats at Whiteman Park (unpub.). However, there are few records from the forested country to the east of Gooseberry Hill in the Birds Australia Atlas II data.

Scarlet Robin *Petroica multicolor* numbers have declined on the study area (Brooker 2001) and only two breeding pairs were recorded during 2001, one in the burnt and one in the unburnt area and both some distance from any of the Red-capped Robin pairs. Yet the six pairs of Red-capped Robins in

2001 used sites which in other years had been occupied by Scarlet Robins. None of the Red-capped Robin nests were built in balgas *Xanthorrhoea preissii*, a substrate favoured by Scarlet Robins (Brooker 2001).

Five other species have shown similar "one-off" breeding episodes on Gooseberry Hill, where over the last 17 years hot summer fires in 1985, 1987, 1994 and 2000 burnt from 40-100% of the study area (Brooker 1998, 2001). Little Button-quail *Turnix velox* nested after the 1985 fire and has not been seen since. Elegant Parrots *Neophema elegans* bred after the fires in the 1980s with no further nesting, with only 9 sightings since 1993. Some White-winged Trillers *Lalage sueurii* were present on the area each year but were recorded breeding only between 1985 and 1988. Dusky Woodswallows *Artamus cyanopterus* nested from 1985 to 1992, with 14 nests found in 1987, in each case on areas affected by fire. Some birds were seen in subsequent years but there was no nesting after the 1994 or 2000 fires. Red-browed Finches *Neochmia temporalis* nested after the 1985 fire through to 1988. In the following 4 years some birds were observed on the area but no nests were found, and there have been very few sightings of this species since 1993.

Episodic breeding is perhaps not unusual for a nomadic eyrean species like the Little Button-quail. However, White-winged Trillers are regular breeding migrants to the Perth region (Storr and Johnstone 1988) and there are resident populations of the other

four species in the vicinity of Gooseberry Hill (pers. obs., W. Bancroft pers. comm.). A number of species are known to make temporary changes to their breeding range following habitat-altering events such as fire (Woinarski and Recher 1997) or drought (Coventry 1988). However in the cases described here, the response has been unpredictable. All the fires were hot and in summer (21 December – 21 February) and rainfall in each of the post-fire years was low, yet the birds bred after fire in some years but not in others. Why should this be so?

Postscript:

Both 2002 and 2003 were fire-free years. In 2002 only one pair of Red-capped Robins frequented the study area and in 2003, none did so.

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